IBM
1000 River Street
Essex Junction, VT 05452

December 6, 2012

Chief, RCRA Waste Management & UST Section
U.S. EPA Region 1 (OSRR07-1)
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Reference: IBM Corporation, Essex Junction, VT Wastewater Treatment Sludge Delisting (40 CFR 261, Appendix IX – Waste Excluded Under §§ 260.20 and 260.22, Table 1 – Wastes Excluded from Non-Specific Sources)

Subject: Submission of Analytical Results for the First Quarter of the Required Quarterly Verification Testing

Dear Ms. Deabay:

As outlined in IBM Corporation's Wastewater Treatment Sludge Delisting (40 CFR 261, Appendix IX – Waste Excluded Under §§ 260.20 and 260.22, Table 1 – Wastes Excluded from Non-Specific Sources), IBM is providing the first quarter of analytical results required as part of the quarterly verification testing process. Sample collection and analysis were performed in accordance with the approved Quality Assurance Project Plan (QAPP) dated 01/27/2011.

The analytical results for both representative samples (Attachment A) show all constituents in paragraph (1) of the delisting to be below detection limits and specified delisting levels.

If you have any questions concerning this information, please contact one of the following members of my staff:

Candice Callahan by telephone at 769-0579 or electronically at ccallaha@us.ibm.com
David Kost by telephone at 769-2761 or electronically at dlkost@us.ibm.com

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this demonstration and all attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Sincerely,

Thomas Jagielski
STG Environmental Affairs Focal Point

Attachments:

Attachment A: Analytical Results for Two Representative Samples

Attachment B: Analytical Laboratory Reports and Laboratory QC Reports for Each Sample

Attachment A:
Analytical Results for Two Representative Samples

ENDYNE Inc.
Environmental Laboratories

IBM	
Mail Stop 966A	100290
Essex Jct, VT 05452	
Atten: Dave Kost	

PROJECT: WW Sludge-Metals-Revised
WORK ORDER: **1210-15548**
DATE RECEIVED: October 10, 2012
DATE REPORTED: November 30, 2012
SAMPLER: Not Indicated

Laboratory Report

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody. All required method quality control elements including instrument calibration were performed in accordance with method requirements and determined to be acceptable unless otherwise noted.

The column labeled Lab/Tech in the accompanying report denotes the laboratory facility where the testing was performed and the technician who conducted the assay. A "W" designates the Williston, VT lab under NELAC certification ELAP 11263; "R" designates the Lebanon, NH facility under certification NH 2037 and "N" the Plattsburgh, NY lab under certification ELAP 11892. "Sub" indicates the testing was performed by a subcontracted laboratory. The accreditation status of the subcontracted lab is referenced in the corresponding NELAC and Qual fields.

The NELAC column also denotes the accreditation status of each laboratory for each reported parameter. "A" indicates the referenced laboratory is NELAC accredited for the parameter reported. "N" indicates the laboratory is not accredited. "U" indicates that NELAC does not offer accreditation for that parameter in that specific matrix. Test results denoted with an "A" meet all National Environmental Laboratory Accreditation Program requirements except where denoted by pertinent data qualifiers. Test results are representative of the samples as they were received at the laboratory

Endyne, Inc. warrants, to the best of its knowledge and belief, the accuracy of the analytical test results contained in this report, but makes no other warranty, expressed or implied, especially no warranties of merchantability or fitness for a particular purpose.

Reviewed by:

Harry B. Locker, Ph.D.
Laboratory Director

Laboratory Report

DATE REPORTED: 11/30/2012

CLIENT: IBM
PROJECT: WW Sludge-Metals-Revised

WORK ORDER: **1210-15548**
DATE RECEIVED 10/10/2012

001 Site: Filter Press — Date Sampled: 10/9/12 Time: 13:46

Parameter	Result	Units	Method	Analysis Date/Time	Lab/Tech	NELAC	Qual.
TCLP Extract-SVOA/Metals	Completed		EPA 1311	10/15/12	W LJF	A	
Arsenic, Total TCLP	< 0.50	mg/L	EPA 6010B	10/23/12	W LJF	A	
Barium, Total TCLP	< 1.0	mg/L	EPA 6010B	10/23/12	W LJF	A	
Cadmium, Total TCLP	< 0.02	mg/L	EPA 6010B	10/23/12	W LJF	A	
Chromium, Total TCLP	< 0.05	mg/L	EPA 6010B	10/23/12	W LJF	A	
Lead, Total TCLP	< 0.20	mg/L	EPA 6010B	10/23/12	W LJF	A	
Mercury, Total TCLP	< 0.010	mg/L	EPA 7470	10/17/12	W CM	A	
Nickel, Total TCLP	< 0.10	mg/L	EPA 6010B	10/23/12	W LJF	A	

Report Summary of Qualifiers and Notes

Report revised to adjust reporting limit of Arsenic.

ENDYNE, INC.

160 James Brown Drive
Williston, Vermont 05495
(802) 879-4333

CHAIN-OF-CUSTODY-RECORD

Special Reporting Instructions/PO#: _____

No 61879

Project Name: IBM Sludge	Client/Contact Name:	Sampler Name:
	Phone #:	Phone #: 238 0071
State of Origin: VT ✓ NY __ NH __ Other __	Mailing Address:	Billing Address:
Endyne WO # 210-15548		

Sample Location	Matrix	GRAB	COMP	Date/Time Sampled 2012	Sample Containers No.	Sample Containers Type/Size	Sample Preservation	Analysis Required	FieldResults/Remarks	Due Date
Filter Press	Sludge		✓	10/8 1153	1	500 ml		TCLP 32		
1	1			10/9 0840						
1	1			10/9 1346						

Relinquished by:	Date/Time	Received by:	Date/Time	Received by:	Date/Time
				John	10/10/12 10:15

1	pH	6	TKN	11	Total Solids	16	Sulfate	21	1664 TPH/FOG	26	8270 PAH Only
2	Chloride	7	Total P	12	TSS	17	Coliform (Specify)	22	8015 GRO	27	8081 Pest
3	Ammonia N	8	Total Diss. P	13	TDS	18	COD	23	8015 DRO	28	8082 PCB
4	Nitrite N	9	BOD	14	Turbidity	19	VT PCF	24	8260B	29	PP13 Metals
5	Nitrate N	10	Alkalinity	15	Conductivity	20	VOC Halocarbons	25	8270 B/N or Acid	30	Total RCRA8
31	Metals (Total, Diss.) Ag, Al, As, B, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, Hg, K, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, Sn, Tl, U, V, Zn										
32	TCLP (volatiles, semi-volatiles, metals, pesticides, herbicides)					33	Other				
34	Corrosivity	35	Ignitability	36	Reactivity	37	Other				
38	Other										

LAB USE ONLY
Delivery: Van
Temp: 4.6
Comment:

(White - Laboratory / Yellow - Client)

ENDYNE Inc.
Environmental Laboratories

IBM	
Mail Stop 966A	100290
Essex Jct, VT 05452	
Atten: Dave Kost	

PROJECT: WW- Sludge Metals-Revised
WORK ORDER: **1211-17239**
DATE RECEIVED: November 12, 2012
DATE REPORTED: December 04, 2012
SAMPLER: Roland

Laboratory Report

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody. All required method quality control elements including instrument calibration were performed in accordance with method requirements and determined to be acceptable unless otherwise noted.

The column labeled Lab/Tech in the accompanying report denotes the laboratory facility where the testing was performed and the technician who conducted the assay. A "W" designates the Williston, VT lab under NELAC certification ELAP 11263; "R" designates the Lebanon, NH facility under certification NH 2037 and "N" the Plattsburgh, NY lab under certification ELAP 11892. "Sub" indicates the testing was performed by a subcontracted laboratory. The accreditation status of the subcontracted lab is referenced in the corresponding NELAC and Qual fields.

The NELAC column also denotes the accreditation status of each laboratory for each reported parameter. "A" indicates the referenced laboratory is NELAC accredited for the parameter reported. "N" indicates the laboratory is not accredited. "U" indicates that NELAC does not offer accreditation for that parameter in that specific matrix. Test results denoted with an "A" meet all National Environmental Laboratory Accreditation Program requirements except where denoted by pertinent data qualifiers. Test results are representative of the samples as they were received at the laboratory

Endyne, Inc. warrants, to the best of its knowledge and belief, the accuracy of the analytical test results contained in this report, but makes no other warranty, expressed or implied, especially no warranties of merchantability or fitness for a particular purpose.

Reviewed by:

Harry B. Locker, Ph.D.
Laboratory Director

Laboratory Report

DATE REPORTED: 12/04/2012

CLIENT: IBM
PROJECT: WW- Sludge Metals-Revised

WORK ORDER: **1211-17239**
DATE RECEIVED 11/12/2012

001 Site: IWTP Sludge — Date Sampled: 11/9/12 Time: 13:15

Parameter	Result	Units	Method	Analysis Date/Time	Lab/Tech	NELAC	Qual.
TCLP Extract-SVOA/Metals	Completed		EPA 1311	11/13/12	W LG	A	
Arsenic, Total TCLP	< 0.50	mg/L	EPA 6010B	12/3/12	W LJF	A	
Barium, Total TCLP	< 1.0	mg/L	EPA 6010B	11/19/12	W LJF	A	
Cadmium, Total TCLP	< 0.02	mg/L	EPA 6010B	11/19/12	W LJF	A	
Chromium, Total TCLP	< 0.05	mg/L	EPA 6010B	11/19/12	W LJF	A	
Lead, Total TCLP	< 0.20	mg/L	EPA 6010B	11/19/12	W LJF	A	
Mercury, Total TCLP	< 0.010	mg/L	EPA 7470	11/20/12	W RBF	A	
Nickel, Total TCLP	< 0.10	mg/L	EPA 6010B	11/19/12	W LJF	A	

Report Summary of Qualifiers and Notes

Report revised to modify the Arsenic and Barium detection limits.

ENDYNE, INC.
160 James Brown Drive
Williston, Vermont 05495
(802) 879-4333

CHAIN-OF-CUSTODY-RECORD

Special Reporting Instructions/PO#: _____ Nº 65160

Project Name:	Client/Contact Name: IBM	Sampler Name: Ronald Luxenberg
	Phone #:	Phone #: 802 238 0074
State of Origin: VT ✓ NY __ NH __ Other __	Mailing Address:	Billing Address:
Endyne WO # 1211-17239		

Sample Location	Matrix	GRAB	COMP	Date/Time Sampled	Sample Containers No.	Sample Containers Type/Size	Sample Preservation	Analysis Required	FieldResults/Remarks	Due Date
IWTP Sludge	solid		✓	11/9/12 1315	1	1L G		TCLP RCRA8-Se+Ni		
				11/10/12 0710						
				11/10/12 1320						

Relinquished by:	Date/Time	Received by:	Date/Time	Received by:	Date/Time
[signature]	11/12/12 0850			Laura Hartman	11/12/12 8:55

1	pH	6	TKN	11	Total Solids	16	Sulfate	21	1664 TPH/FOG	26	8270 PAH Only
2	Chloride	7	Total P	12	TSS	17	Coliform (Specify)	22	8015 GRO	27	8081 Pest
3	Ammonia N	8	Total Diss. P	13	TDS	18	COD	23	8015 DRO	28	8082 PCB
4	Nitrite N	9	BOD	14	Turbidity	19	VT PCF	24	8260B	29	PP13 Metals
5	Nitrate N	10	Alkalinity	15	Conductivity	20	VOC Halocarbons	25	8270 B/N or Acid	30	Total RCRA8 *
31	Metals (Total, Diss.) Ag, Al, As, B, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, Hg, K, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, Sn, Tl, U, V, Zn +Ni-Se										
32	TCLP (volatiles, semi-volatiles, metals, pesticides, herbicides)					33	Other				
34	Corrosivity	35	Ignitability	36	Reactivity	37	Other				
38	Other										

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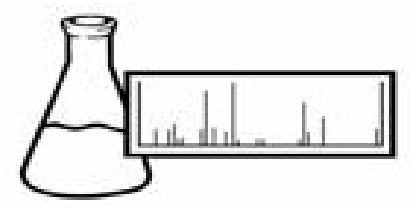
Page ____ of ____

Attachment B:
Analytical Laboratory Reports and Laboratory QC Reports for Each Sample



ENDYNE, INC.
Laboratory Services

160 James Brown Drive
Williston, VT 05495
(802) 879-4333

QC Data Interpretation Report
EPA 7470 Mercury-TCLP

Client:	IBM	Work Order:	**1210-15548**
Project:	WW Sludge-Metals	Sample Date:	October 8-9, 2012
Report Date:	October 25, 2012	Analysis Date:	October 17, 2012
Receive Date:	October 10, 2012	Analytical Batch #:	68656

Analytical Run Sequence

Run Sequence Identification	Result as ug/L	Target	% Recovery	Reported Value mg/L
Calibration Verification:	1.968	2	98%	
Laboratory Reagent Blank	0.017			
Independent Laboratory Fortified Blank:	1.925	2	96.3%	
1210-15548-001	0.010			< 0.010
Matrix Spike of 15548-001	1.888	2	94%	
Matrix Spike Duplicate	1.909		1.1%	% Difference
Continuing Calibration Check	1.981	2	99%	

Notes:

All Method associated Quality Control was within acceptance limits

-Instrument Quantitation Limit is 1.0ug/L

- All TCLP analyses are analyzed at a 1-10 dilution.

-Calibration Verification acceptance limits:	90%-110%
-Laboratory Fortified Blank (QC) control limits:	90%-110%

-Laboratory Reagent Blank (LRB) was free of contaminant affecting analytical results.

-Duplicate Percent Relative Standard Deviation Limits:	20%
-Matrix Spike Acceptance Limits:	85%-115%

Laboratory Data Quality Report
EPA 6010B- ICP Metals TCLP

ENDYNE INC.
Laboratory Services

160 James Brown Drive
Williston, VT 05495
(802) 879-4333 FAX 879-7103

Client: IBM
Project: WW Sludge-Metals
Sampled: October 8-9, 2012

Work Order #: 1210-15548
Date Received: October 10, 2012
Date Reported: October 25, 2012

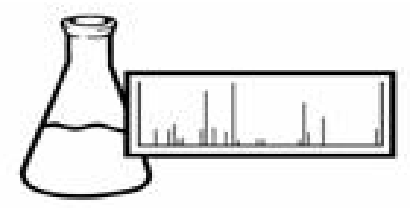
Date Analyzed: October 23, 2012
Analytical Batch #: 68,923

Parameter	Int. Chk. mg/L	Int. Chk. % Rec	CCV mg/L	CCV % Rec	TMLFB mg/L	TMLFB % Rec	TMLRB (mg/L)	1210-15548-001 mg/L *	1210-15548-001 Reported	MS (LFM) mg/L	MS (LFM) % Rec	MSD mg/L	MSD % Diff	CCV mg/L	CCV % Rec
Arsenic	-0.0037	NA	1.0244	102%	1.0299	103%	0.0013	0.0144	< 0.50	1.1217	112%	1.0944	2.5%	1.0237	102%
Barium	0.4896	97.9%	1.0043	100%	0.9939	99.4%	0.0005	0.0226	< 1.0	1.0460	105%	1.0152	3.0%	1.0057	101%
Cadmium	0.9705	97.1%	0.1029	103%	0.1013	101%	0.0000	-0.0022	< 0.02	0.1040	104%	0.1015	2.4%	0.1021	102%
Chromium	0.4905	98.1%	1.0027	100%	0.9991	100%	-0.0003	0.0039	< 0.05	1.0575	106%	1.0291	2.7%	1.0019	100%
Lead	0.931	93.1%	0.9813	98.1%	0.9758	97.6%	0.0068	0.0032	< 0.02	1.0071	101%	0.9763	3.1%	0.9692	96.9%
Nickel	0.9512	95.1%	0.9926	99.3%	0.9703	97.0%	-0.0026	0.0013	< 0.10	1.0167	102%	0.9872	2.9%	0.9869	98.7%

Notes:

* SOP is to digest at a 1-10 dilution. mg/L value is instrument measurement not accounting for dilution.

- NA: Not Available. Sample not assessed for this element.
- All QA parameters were within acceptance limits unless otherwise noted. Bold Font indicates value outside laboratory acceptance limits
- (Int. Chk.) Interference Check acceptance limits: 70 - 130%.
- (CCV) Continuing Calibration Verification acceptance limits: 90 - 110%.
- (LFB) Laboratory Fortified Blank digested in TCLP Buffer acceptance limits are 85-115%.
- (LRB) Laboratory Reagent Blank digested in TCLP Buffer was free of contaminant affecting analytical results.
- (MS) Matrix Spike acceptance limits: 70 - 130%. Values were determined to be within method acceptance limits unless noted.
- (MSD) Matrix Spike Duplicatee relative percent difference (RPD) acceptance criteria is < 20%.



ENDYNE, INC.
Laboratory Services

160 James Brown Drive
Williston, VT 05495
(802) 879-4333

QC Data Interpretation Report
EPA 7470 Mercury-TCLP

Client:	IBM	Work Order:	**1211-17239**
Project:	WW Sludge-Metals	Sample Date:	November 9-10, 2012
Report Date:	November 26, 2012	Analysis Date:	November 20, 2012
Receive Date:	November 12, 2012	Analytical Batch #:	69729

Analytical Run Sequence

Run Sequence Identification	Result as ug/L	Target	% Recovery	Reported Value mg/L
Calibration Verification:	2.073	2	104%	
Laboratory Reagent Blank	-0.037			
Independent Laboratory Fortified Blank:	2.052	2	102.6%	
1211-17239-001	-0.028			< 0.010
Matrix Spike of 17239-001	2.025	2	101%	
Matrix Spike Duplicate	2.072		2.3%	% Difference
Continuing Calibration Check	2.075	2	104%	

Notes:

All Method associated Quality Control was within acceptance limits

-Instrument Quantitation Limit is 1.0ug/L

- All TCLP analyses are analyzed at a 1-10 dilution.

-Calibration Verification acceptance limits:	90%-110%
-Laboratory Fortified Blank (QC) control limits:	90%-110%

-Laboratory Reagent Blank (LRB) was free of contaminant affecting analytical results.

-Duplicate Percent Relative Standard Deviation Limits:	20%
-Matrix Spike Acceptance Limits:	85%-115%

Laboratory Data Quality Report
EPA 6010B- ICP Metals TCLP

ENDYNE INC.
Laboratory Services

160 James Brown Drive
Williston, VT 05495
(802) 879-4333 FAX 879-7103

Client: IBM
Project: WW Sludge-Metals
Sampled: November 9-10, 2012

Work Order #: 1211-17239
Date Received: November 12, 2012
Date Reported: November 26, 2012

Date Analyzed: November 19, 2012
Analytical Batch #: 69,772

Parameter	Int. Chk. mg/L	Int. Chk. % Rec	CCV mg/L	CCV % Rec	TMLFB mg/L	TMLFB % Rec	TMLRB (mg/L)	1211-17239 mg/L *	1211-17239 Reported	16762** mg/L	MS (LFM) mg/L	MS (LFM) % Rec	MSD mg/L	MSD % Diff	CCV mg/L	CCV % Rec
Arsenic	0.0028	NA	1.0135	101%	0.9470	95%	0.0059	0.0066	< 0.5 ***	0.0167	1.0551	106%	1.0507	0.4%	0.9946	99%
Barium	0.5365	107%	1.1417	114%	1.0689	107%	0.0000	0.0116	< 1.0	0.0182	1.0602	106%	1.0551	0.5%	1.171 ****	117%
Cadmium	0.9575	95.8%	0.1011	101%	0.0965	96.5%	0.0000	-0.0016	< 0.02	0.0008	0.1014	101%	0.1013	0.1%	0.1085	109%
Chromium	0.4387	87.7%	0.9490	94.9%	0.8865	88.7%	0.0005	0.0021	< 0.05	0.0043	0.9229	92%	0.9168	0.7%	0.9857	99%
Lead	0.8892	88.9%	0.9789	97.9%	0.9341	93.4%	0.0197	0.0124	< 0.20	0.3132	1.2514	94%	1.2053	3.8%	1.0401	104.0%
Nickel	0.9225	92.3%	1.0067	101%	0.9471	94.7%	-0.0010	0.0027	< 0.10	0.0014	0.9699	97%	0.9724	0.3%	1.0686	106.9%

Notes:

* SOP is to digest at a 1-10 dilution. mg/L value is instrument measurement not accounting for dilution.

** Batch MS-MSD performed on sample not associated with IBM WW Sludge-Metals

*** Arsenic reanalyzed on 12-3-12 to provide standard reporting limit.

**** Closing CCV failed high, Samples did not have detections so data was accepted.

- NA: Not Available. Sample not assessed for this element.
- All QA parameters were within acceptance limits unless otherwise noted. Bold Font indicates value outside laboratory acceptance limits
- (Int. Chk.) Interference Check acceptance limits: 70 - 130%.
- (CCV) Continuing Calibration Verification acceptance limits: 90 - 110%.
- (LFB) Laboratory Fortified Blank digested in TCLP Buffer acceptance limits are 85-115%.
- (LRB) Laboratory Reagent Blank digested in TCLP Buffer was free of contaminant affecting analytical results.
- (MS) Matrix Spike acceptance limits: 70 - 130%. Values were determined to be within method acceptance limits unless noted.
- (MSD) Matrix Spike Duplicatee relative percent difference (RPD) acceptance criteria is < 20%.